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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,768	06/19/2001	Brian W. Carr	P04605US1	2949 8
34082	7590	11/19/2003	EXAMINER	
ZARLEY LAW FIRM P.L.C. CAPITAL SQUARE 400 LOCUST, SUITE 200 DES MOINES, IA 50309-2350			CROSS, LATOYA I	
			ART UNIT	PAPER NUMBER
			1743	

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/883,768

Applicant(s)

CARR ET AL.

Examiner

LaToya I. Cross

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 and 14 is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13 is/are rejected.
- 7) ☒ Claim(s) 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

This Office Action is in response to Applicants' amendment filed on September 8, 2003 and entered as Paper No. 7. Claims 1-16 are pending.

#### Withdrawal of Rejections from Previous Office Action

- The rejection of claims 1-11 and 13 under 35 USC 102(e) is withdrawn in view of Applicants' amendment to recite that the presentation surface is "fixed".
- The objection of claims 12 and 14 is withdrawn.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wright et al '583.

Wright et al teach a method and apparatus for measuring constituents of substances or products. The method and apparatus use near infrared spectroscopy for grain analysis. As shown in figure 6 of the reference, a chopper cuts and chops grain or forage. The chopped substance falls through into a cyclone and is collected in a weigh box (40) having a pair of doors (76) disposed on the lower portion of the weigh box. The weigh box is equivalent to Applicants' claimed overhead grain compartment. Wright et al also teach the use of a chute (16), which would be equivalent to Applicants' claimed overhead grain compartment. The pair of doors (76) is equivalent to Applicants' claimed discharge port. After the grain is weighed, the doors of the weigh box open and the grain drops onto a conveyor belt (78). The conveyor belt is the surface where analysis of the grain takes place. According to figure 6, the conveyor belt is positioned at an angle toward the blower. Thus, the conveyor belt provides a sloping presentation surface as recited by Applicants in claims 1 and 7. A wheel, wall (82) and vertical conveyor control the level of grain the passes by the monochromator (32, 84). The monochromator includes a light source (88) and a light sensor (90), the optics for near infrared spectroscopy. As light is transmitted by the light source, it reflects off the sample and is detected by the light sensor. The reflected light is then analyzed to determine the constituents of the grain. See col. 4, line 59 – col. 5, line 7. At col. 6, lines 23-37, Wright et al teach that the area surrounding the sensor is enclosed to limit the amount of stray light which may affect the performance, as recited in claims 2 and 9. With respect to claim 3, Wright et al teach that a wall (82), equivalent to Applicants' claimed baffle, helps in controlling the level of sample that passes by the monochromator and helps to ensure an even flow of sample pass the monochromator (col. 8, lines 61-63). With respect to claim 4, the reference teaches that

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successive samples may be analyzed and the process is constant and repeatable (col. 7, lines 29-34). With respect to claims 5 and 11, figures 1 and 6 show the near infrared spectroscopy device being attached to a harvesting combine to allow analysis to take place during harvesting. With respect to claims 6 and 10, Wright et al teach a computer/controller (92) connected to the monochromator for controlling the analysis of the sample. With respect to claim 13, figure 6 of the reference show the monochromator located adjacent to the conveyor belt where the grain flows.

Wright et al '583 fails to specifically teach a combine comprising a "fixed" sloping presentation surface; the reference teaches analyzing the grain materials while on a moving conveyor belt. However, Wright et al '583 do provide alternatives to using the conveyor belt. At col. 11, lines 36-44, the reference teaches that a pipeline may be used, as shown in Figure 15. Materials to be analyzed are allowed to flow through the pipeline, the surface of which constitutes a presentation surface, and are analyzed using an NIR measurement apparatus.

It would have been obvious to one of ordinary skill in the art to incorporate a pipeline onto a combine, where the pipeline would serve as a presentation surface for analyzing grain material. The pipeline would have provided a more stable surface to analyze the grain material. Wright et al '583 teaches that inaccurate results are achieved where testing environment is subject to vibrations, such as on a conveyor belt (col. 10, lines 46-62). The fixed pipeline surface would have allowed real time measurement of the grain material and provide a stable, controlled environment that would alleviate vibrations that may cause inaccurate results.

***Allowable Subject Matter***

4. Claims 12 and 14 are allowed.

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5. Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Response to Arguments*

6. Applicant's arguments filed September 8, 2003 have been fully considered but they are not persuasive. With respect to the rejection over Wright et al '583, Applicants argue that the reference teaches analyzing the grain material while the grain material is moving along a conveyor belt, whereas the amended claims recite a "fixed" presentation surface. In response, Wright et al '583 teach alternatives to the conveyor belt. Specifically, the reference teaches the use of a pipeline, wherein material to be analyzed is flowed through the pipeline and analyzed with a measurement apparatus in communication with the flow of material. See figure 15. The ordinarily-skilled artisan would have been motivated to use a pipeline as the presentation surface, instead of the conveyor belt, because the pipeline offers a more stable surface on which the analysis may take place. Wright et al '583 teaches that moving surfaces result in vibrations that may result in inaccurate measurements. Using the pipeline as a measurement surface alleviates vibrations that may potentially result in incorrect readings.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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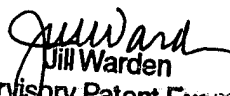
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya I. Cross whose telephone number is 703-305-7360. The examiner can normally be reached on Monday-Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 703-308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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November 17, 2003

  
Jill Warden  
Supervisory Patent Examiner  
Technology Center 1700